a review of MATLAB handbook with applications to mathematics, science, engineering, and finance. by Baez-Lopez, Jose Miguel David; Baez Villegas, David Alfredo

Báez-López, José Miguel David; **Báez Villegas, David Alfredo**

MATLAB handbook with applications to mathematics, science, engineering, and finance. (English) Zbl 06945123

Boca Raton, FL: CRC Press (ISBN 978-1-138-62645-4/hbk; 978-1-315-22845-7/ebook). xix, 362 p. (2019).

MATLAB is an acronym for MATrix LABoratory, having been developed in 1984 by Cleve Moler and Jack Little to perform matrix calculations. The first two chapters of the book are an introduction to MATLAB. The following three chapters, 3 through 5, deal with basic calculations in MATLAB, the topics including linear algebra, calculus, and plotting. The next three chapters, 6 through 8, are devoted to programming, advanced programming techniques, graphical user interface (GUI) development, and Simulink, which is a MATLAB-based GUI user interface useful for system modelling and simulation. The last five chapters, 9 through 13, address a broad set of examples illustrating applications in several engineering disciplines, physics and finance. Many exercises are included, along with solutions available for the aspiring reader on the book's web page, being a complement for the interested reader to deepen his or her understanding.

Reviewer: Hirokazu Nishimura (Tsukuba)

MSC:

68-00 General reference works (handbooks, dictionaries, bibliographies, etc.) pertaining to computer science
68N15 Theory of programming languages
00A06 Mathematics for nonmathematicians (engineering, social sciences, etc.)

Software:

Matlab; Simulink

Full Text: DOI